<b>OEM alarm control.</b> Make sure the module is able to arm and disarm the oem alarm (if applicable).
<b>Door pin shutdown circuit.</b> Make sure the system <b>exits ready mode</b> when each door is opened while the vehicle is running under a remote start. (Test each door.)
Door locks and trunk testing. Make sure each of these options respond to the transmitter (if installed).
<b>Starter kill option.</b> Sit inside the vehicle with all doors closed. Arm the vehicle, then try to start the engine with the key. The engine should not start. If the engine starts, rewire the starter kill to reach proper operation.
Valet mode. Make sure the remote car starter is able to properly enter and exit valet mode. When setting the remote car starter into valet mode, pressing the lock button will lock the doors without activating the starter kill. (Refer to the user guide for further information on valet mode.)
Idle mode. Make sure the vehicle properly enters and exits idle mode.
Most comebacks are the result of misunderstandings about how a product works or performs. Take the time to properly explain all functions and features to the customers before they leave the premises. Doing this will save

#### Diagnostics - Parking Light Flash Table

Diagnostic table for shutdown.

time and money.

Parking lights flashes	Cause
1	Runtime has expired.
2	Shutdown by remote.
2	Ready mode is activated.
3	Failed start.
4	Brake shutdown.
10	Hood shutdown.
Flash for 30sec	Panic mode

Diagnostic table for start failure.

Parking lights flashes	Cause	
1	Ready mode is not activated.	
(Manual transmission only)	Tach signal is not learned.	
1 slow -> 2 quick	The system is set to valet mode.	
3	The parking brake is active.	
(Automatic transmission only)	Yellow loop is connected.	
4	Brake wire is active	
6	A tach signal is detected before Ignition.	
10	Hood wire is active.	

**Note:** The installer can also use the PRG-1000 to diagnose shutdown and remote start failures. Refer to the PRG-1000 manual quide.

P. 8 http://www.autostart.ca/ Installation Guide

#### 4 - BUTTON MANUAL / AUTOMATIC TRANSMISSION REMOTE STARTER WITH VIRTUAL TACH SYSTEM (AS PRG-1000 COMPATIBLE)

### Quick Installation Guide







To obtain a copy of the installation guide, please visit the http://www.autostart.ca website and click on the « Download » tab.

#### Table of Contents

How to Enter programming mode1	Multi-speed Tach Programming 6
Resetting the Module1	Horn Honk Timing adjustment 6
Manual or Automatic Transmission 2	Supplementary Information 6
Transmitter Programming Procedure 2	Fifth Relay Output (2nd IGN, ACC or CRANK)6
Entering Programming Options 2	Tach jumper settings 7
Programming Options 2	Testing 7
Bypass 3	Diagnostics - Parking Light Flash Table 8
Virtual Tach System6	Diagnostic table for shutdown 8
Optional Time Delay Adjustment in Virtual Tach	Diagnostic table for start failure8
System 6	-

# How to Enter programming mode THE INSTALLER ... THE MODULE ... 1) Press and hold the hood pin for 4 seconds. 2) Release the hood pin (the parking lights will turn ON). 3) While the parking lights are on, press the hood pin once more and release immediately. 4) You now have 20 seconds to select one of the programming sub-menus. 5) To exit programming mode, close the HOOD.

#### Resetting the Module

**WARNING!** By resetting the module, all programmed values are erased — i.e.: tach, transmitter as well as programming options. The programming options are returned to their default values.

- Enter programming mode (see above).
- Once having reached the programming mode, quickly press and release the brake pedal until the parking lights flash 8 times (you will need to press the brake pedal a minimum of 5 times).

#### Notic

The manufacturer will accept no responsibility for any electrical damage resulting from improper installation of the product, be that either damage to the vehicle itself or to the unit. This unit must be installed by a certified technician using all safety devices supplied. Please note that this guide has been written for properly trained Autostart technicians: a certain level of skills and knowledge is therefore assumed. Please review the installation guide carefully before beginning any work.

#### Warning

Before installing the unit, if installing on a vehicle with a **manual** transmission, test that the OEM Door Switch contacts of the vehicle work well, and that the Parking Brake system operates properly. If installing on a vehicle with an **automatic** transmission, test that the vehicle does not start when the gearshift lever is in the "Drive" position. If it starts in gear, reset the remote starter to manual transmission.

Doc#: 090914 Rev:2.0 © 2009 - 1W-AM-4B-A-M - SS - Assembled in Canada

#### Manual or Automatic Transmission

This module may be installed on vehicles with manual or automatic transmissions. It is originally configured for <u>manual transmissions</u>. If the vehicle you are working on is automatic, it is mandatory to make a few quick and easy modifications before the unit is connected. <u>In the event that the configuration requires changes afterwards</u>, a complete reset of the unit will be necessary before those changes become effective.

#### To install this unit in a vehicle with a manual transmission:

- Make sure the Yellow loop on the PC board is connected.
- Connect the Orange handbrake wire located on the 12-pin harness to the vehicle handbrake switch.
- Connect the BlueWhite (+) door input <u>OR</u> the Grey (-) door input wire located on the 12-pin harness to the
  vehicle door pin wire, which monitors all the doors of the vehicle (only use 1 of the 2 door trigger inputs).
- Make sure the Purple TACH wire is plugged in the purple TACH wire MUST be hooked up when the module is set for a manual transmission.
- Make all your regular connections.
- Power up the unit by first inserting the 5-pin connector, then the 6-pin connector and finally the 12-pin connector.
   The parking lights will flash 4 times.
- 7. When learning the transmitter, the parking lights will flash 5 times quickly.
- 8. Upon the first successful remote start, the system will lock the transmission settings to manual mode.

#### To install this unit in a vehicle with an automatic transmission:

- 1. Cut the loop on the pc board (Yellow wire).
- 2. Make sure the **Orange** handbrake wire is not connected to any of the vehicle circuits.
- Make all the regular connections.
- 4. Power up the unit. The parking lights will flash 4 times.
- 5. When learning the transmitter, the parking lights will flash 5 times guickly then give 2 slow flashes.
- Upon the first successful remote start once the yellow loop has been cut, the system will lock the transmission settings to automatic mode.

Note: If upon pressing the START/STOP button, the parking lights give 3 slow flashes, make sure that the Orange handbrake wire is not connected and that the yellow loop is cut and isolated.

#### **Transmitter Programming Procedure**

- . Enter programming Mode (page-1) the parking lights will stay on for up to 20 seconds.
- 2. Before the lights go out, turn the ignition key to the **IGNITION ON (RUN)** position and immediately to the **OFF** position.
- 3. Press and hold the LOCK button and keep it down until the parking lights flash 5 times guickly.
- The transmitter has been stored in memory.
- To exit: close the hood.Note: Each unit can store 4 remotes in its memory.

To program a transmitter on the second vehicle for multi-car operation, you must press the TRUNK button (instead of LOCK or UNLOCK) in step 3 of the transmitter programming procedure:

#### **Entering Programming Options**

- 1. Enter programming Mode (page-1) the parking lights will stay on for up to 20 seconds.
- Before the lights go out, press and hold the brake pedal and then press one of the following buttons: Note: For
  vehicles that require the ignition to be turned ON to activate the brake, follow these steps:
  - a. Turn the ignition ON; The parking lights will turn OFF
  - b. After 4 seconds the parking lights will turn ON and then press the brake.

LOCK	to access mode 1;
UNLOCK	to access mode 2; or
TRUNK	to access mode 3.

- 3. The parking lights will flash and the horn will honk (if programmed) 1, 2 or 3 times to confirm entry into a mode.
- Release the brake pedal.
- Once the desired mode has been selected, the unit will fall (by default) into function #1 of that mode; you can now select the option you want in function 1. Once this option has been chosen, the unit will move on to function 2 of the mode selected, and so on.

LOCK	for	Option 1,
UNLOCK	for	Option 2,
TRUNK	for	Option 3.

Programming Options		
MODE 1 (* indicates default setting)		
FUNCTION 1 Ignition-controlled door locks		
OPTION 1*	Ignition-controlled door locks DISABLED	
OPTION 2	Ignition-controlled door locks ENABLED	
FUNCTION 2 – Secure Lock		
OPTION 1*	Secure lock DISABLED	
OPTION 2	Standard secure lock ENABLED	
FUNCTION 3 – Starter Kill arming mode		
OPTION 1*	Passive arming (60 sec.)	
OPTION 2	Active arming	

P. 2 http://www.autostart.ca/ Installation Guide

#### Caution!

Only one set of pins can be used at one time. Using more than one jumper may result in serious damage to the vehicle. The relay output rating on this unit is 25a at most. Defective oem solenoid switches can sometimes draw up to 50 or 60a, causing the 30a fuse to blow. Always verify your circuit with an appropriate measuring device.

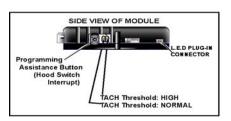
#### Tach jumper settings

Some new vehicles have a higher TACH voltage threshold, which would fall out of the normal TACH trigger circuit of the remote car starter. Changing the jumper to TACH Threshold HIGH will allow the module to properly detect the TACH signal.

#### **Testing**

Installation Guide

Before putting back the vehicle together, it is recommended to check that the system operates properly. The following testing procedures should be used to verify proper installation and operation of the system. Before testing, make sure that all connections are soldered and that the unit is plugged in.



P. 7

#### If installed on a MANUAL transmission, make sure the system properly enters and exits ready mode:

Ready mode is a sequence of steps that must be followed in order to allow manual transmission vehicles to be remote started. To get into ready mode:

	If Ready Mode is enabled by remote	If Ready Mode is enabled by handbrake
1.	Ensure that all the doors, hood and trunk are closed	. Make sure that the gear selector is in the neutral position.
2.	With the engine already running, apply the parking brake once and release the brake pedal.	With the engine already running, apply the parking brake twice within 10sec.     Make sure to release the brake pedal.     The parking lights will flash 3 times quickly and remain lit.     Skip to step 4.
3.	Within 20 sec. of engaging the parking brake, press and hold , or on the transmitter.  The parking lights will flash 3 times quickly and remain lit.	-
4.	Remove the key: the engine will continue running.	
5. Exit the vehicle and close all doors, hood and trunk.		
<ul> <li>6. Press for approx. 1 second either:</li> <li>to lock the doors and shut down the engine;</li> <li>to unlock the doors and shut down the engine;</li> <li>to shut down the engine without affecting the doors.</li> </ul>		
7. The parking lights will flash twice to confirm ready mode activation.		

The system will exit ready mode if a door or the hood is opened, if the brake pedal is pressed, if the parking brake is disengaged or if the ignition key is turned to the **IGNITION ON (RUN)** position.

Remote-start the engine and listen for starter drag. If the starter cranks for too long, carry out another tach programming procedure.
Hood switch shutdown. With the vehicle running under the remote car starter, onen the head; the vehicle should shut

- Hood switch shutdown. With the vehicle running under the remote car starter, open the hood; the vehicle should shut down. If it does not shut down, check the hood pin-switch and its connector.
- ☐ Brakes shutdown circuit. With the vehicle running under the remote car starter, press and release the brake pedal. The engine should shut down immediately. If the engine continues to run, check the brake switch connection.
- Parking brake shutdown circuit. With the vehicle running under remote start, disengage the parking brake. The engine should shut down immediately. If the engine continues to run, check the parking brake switch connection.

http://www.autostart.ca

#### **Virtual Tach System**

\* Virtual Tach System combines the latest microcontroller technology and a complex algorithm that took years to develop. VTS is able to effectively monitor the engine starting sequence and release the starter at the right time without physically connecting the tach wire to the remote starter. The VTS constantly monitors the data and readjusts itself automatically in order to maximize its capability to start the engine properly in any weather or deteriorating battery condition (automatic transmission only).

Optional Time Delay Adjustment in Virtual Tach System

Follow these steps to program crank time adjustment, if needed:

- 1. **Enter programming mode (page-1)** the parking lights will stay on for up to 20 seconds.
- Before the lights go out, press and hold the brake pedal and press the LOCK and UNLOCK buttons simultaneously the
  parking lights will flash 4 times. Do not release the brake pedal.Note: For vehicles that require the ignition to be turned ON
  to activate the brake, follow these steps:
  - a. Turn the ignition ON; The parking lights will turn OFF
  - b. After 4 seconds the parking lights will turn ON and then press the brake.
- Press the LOCK button if you wish to increase the time delay or the UNLOCK button if you want to decrease it. The time delay will be increased or decreased by 50ms. and the parking lights will flash once every time the LOCK or UNLOCK button is pressed.
- 4. Press the **TRUNK** button to save the settings you have entered.
- 5. Release the brake pedal the time delay programming is now complete.

#### **Multi-speed Tach Programming**

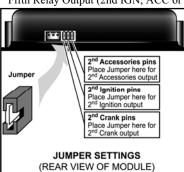
- 1) Enter programming mode (page-1) the parking lights will stay on for up to 20 seconds.
- Before the lights go out, press and hold the brake pedal and press the LOCK and UNLOCK buttons simultaneously the parking lights will flash 4 times. At that point, release the brake pedal. Note: For vehicles that require the ignition to be turned ON to activate the brake, follow these steps:
  - a) Turn the ignition ON: The parking lights will turn OFF
  - b) After 4 seconds the parking lights will turn ON and then press the brake.
- Start up the engine and allow the vehicle to reach regular engine idle speed.
- 4) Once the engine is running at normal idle speed, press the brake pedal and keep it down until you hear the parking lights output click 5 times.
- 5) Release the brake pedal —the tach programming is now complete.

#### Horn Honk Timing adjustment

- 1) Enter programming mode (page-1)
- Press and hold the brake pedal, then simultaneously press the UNLOCK and START/STOP buttons the horn will
  chirp 5 times. Note: For vehicles that require the ignition to be turned ON to activate the brake, follow these steps:
  - a Turn the ignition ON; The parking lights will turn OFF
  - b After 4 seconds the parking lights will turn ON and then press the brake.
- 3) Release the brake pedal.
- 4) To change the timing:
  - To increase the Horn pulse by 3 ms, press the LOCK button.
  - To decrease the pulse by 3 ms, press the UNLOCK button.
  - To increase the pulse by 10 ms, press the **START/STOP** button.
  - To decrease the pulse by 10 ms, press the TRUNK button.
- To save the new settings: press LOCK and UNLOCK. If 3 chirps are returned, the new settings have been saved.

#### **Supplementary Information**

Fifth Relay Output (2nd IGN, ACC or CRANK)



Remote car starters of this series are equipped with an on-board high-current programmable 5<sup>th</sup> relay that can be used to power a second ignition, accessory or crank wire. The unit uses 3 sets of pins: each set corresponds to a specific function of the output. In order to activate one of the three possible functions, you must place the jumper (supplied) on one of the three sets of pins and connect the 14 AWG wire to the second IGN. / ACC. / CRANK wire of the vehicle

OPTION 3	Passive arming (3 min.)		
FUNCTION 4 – Door loo	FUNCTION 4 – Door lock pulse timing		
OPTION 1*	7/10-sec. lock / unlock pulses		
OPTION 2	4-sec. lock / unlock pulses		
OPTION 3	7/10-sec. lock pulse and two ¼ -sec. unlock pulses		
FUNCTION 5 – LED flashing			
OPTION 1*	ENABLED (without starter kill → will flash only when ignition is OFF)		
OPTION 2	DISABLED		
OPTION 3	<b>ENABLED</b> (with starter kill → will <b>ONLY</b> flash when the starter kill engages.		
	This option should be selected <b>ONLY</b> if the starter kill is installed.)		

MODE 2 (* indicates default set	ting)
FUNCTION 1 - Engine F	Run Time
OPTION 1	Run Time = 3 minutes in gas mode / 8 minutes diesel mode
OPTION 2*	Run Time = 15 minutes in gas mode / 20 minutes diesel mode
OPTION 3	Run Time = 25 minutes in gas mode / 30 minutes diesel mode
FUNCTION 2 – Idle Mod	de & Turbo Mode (auto) / Turbo Mode (manual)
OPTION 1	Idle mode & turbo mode DISABLED (AUTO) / turbo mode DISABLED (MANUAL)
OPTION 2*	Idle mode & turbo mode ENABLED (AUTO) / turbo mode DISABLED (MANUAL)
OPTION 3	Idle mode & turbo mode ENABLED (AUTO) / turbo mode ENABLED (MANUAL)
FUNCTION 3 – Engine	type and Cold Weather Mode
OPTION 1	Diesel mode with 20-minute run time in cold weather mode (30-sec. wait to start delay)
OPTION 2*	Gas mode with 3-minute run time in cold weather mode
OPTION 3	Diesel mode with 8-minute run time in cold weather mode (18-sec. wait to start delay)
FUNCTION 4 – AUX 1 p	programming
OPTION 1	Horn confirmation upon the 2 <sup>nd</sup> press of the <b>LOCK</b> button
OPTION 2*	Priority door access
OPTION 3	Horn confirmation upon the 1 <sup>st</sup> press of the <b>LOCK</b> button.
FUNCTION 5 – Pager (F	Pager sold separately)
OPTION 1	Pager ENABLED
OPTION 2*	Pager <b>DISABLED</b>

MODE 3 (* indicates default setting)		
FUNCTION 1 – Ready Mode Option		
OPTION 1	Enabled by handbrake	
OPTION 2*	Enabled by remote	
FUNCTION 2 – Bypass	·	
OPTION 1	ADS	
OPTION 2*	Xpresskit	
OPTION 3	Fortin	
FUNCTION 3 – Bypass Type		
OPTION 1	One Way communication	
OPTION 2*	Two Way communication (For Xpresskit bypass only)	

#### **Bypass**

Remote starters of this series have the ability to work in two way mode (D2D) with **Xpresskit** bypass modules. They also offer one way communication with **Xpresskit**. **ADS** and **Fortin** brand bypass modules.

Note: For Hardware 5.0 and higher, there can only be one bypass connected to the unit.

P. 6 http://www.autostart.ca/ Installation Guide Installation Guide http://www.autostart.ca P. 3

## WIRING SCHEMATIC

